

ABSTRACT

A pre-fiber composition is disclosed herein that includes: a) a first fiber constituent having a first melting point; b) a second fiber constituent having a second melting point; and c) a gelling agent that solvates at least one of the first fiber constituent or the second fiber constituent, wherein the gelling agent significantly reduces co-polymerization of either of the constituents in the composition. A fiber is also disclosed herein that includes: a) at least two amide-based polymers, each having a melting point, wherein the melting point of one amide-based polymer is dissimilar to the melting point of a second amide-based polymer; and b) a gelling agent that is compatible with at least one of the amide-based polymers, wherein the fiber comprises two differentiable melting points that are substantially similar to the melting points of each of the amide-based polymers. A method of producing a pre-fiber composition is disclosed herein that includes: a) providing a first fiber constituent having a first melting point; b) providing a second fiber constituent having a second melting point, wherein the first melting point and the second melting point are dissimilar; c) providing at least one gelling agent; and d) mixing the first constituent, the second constituent and the at least one gelling agent such that there is sufficient viscosity and sufficient melt strength in the composition so that it can be spun into a fiber and such that the first melting point and the second melting point in the fiber are substantially similar to their original values before mixing.